CLAIMS

What is claimed is:

1. A system for providing two qualities of service from a single data stream, comprising:

   (a) a storage space for storing at least one of a first quality of service choice and a second quality of service choice for each of a plurality of users;

   (b) a processor programmed to direct the data stream for each user according to that user's quality of service choice;

   (c) multicasting apparatus for receiving the data stream from the processor and multicasting the data stream to each user for which the first quality of service choice is stored in said storage space; and

   (d) a point-to-point device for receiving the data stream from the processor and ensuring that each user for which the second quality of service is stored in said storage space receives the data stream.

2. A system according to claim 1, further comprising a listener adapted to listen for information sent in the data stream to one of the users of the system.

1   3.   A system according to claim 1, further comprising a single API for

2   providing instructions to the processor for both qualities of service.

1   4.   A system according to claim 1, further comprising a thread of

2   execution for each user selecting the multicast quality of service, the thread

3   of execution listening on the user's behalf for a message on the multicast

4   stream then delivering the message to the user.

1   5.   A system according to claim 1, further comprising a queue for each

2   listener, allowing a user to receive messages for both qualities of service.

1   6.   A system according to claim 1, wherein said storage space may

2   store separate choices for each user for multiple data streams.

1   7.   A system according to claim 1, further comprising a filtering device

2   allowing a user to filter out certain messages in the data stream.

1   8.   A method for allowing a user to select a quality of service for

2   message delivery, comprising:

3   (a) storing at least one of a first quality of service choice and a

4   second quality of service choice for each user of the system;

5   (b) processing each message received on a data stream using a

6   single API and redirecting the message for each user

7   according to that user's quality of service choice;

8   (c) multicasting the message to each user selecting the first quality

9   of service; and

10   (d) sending the message directly to each user selecting the second

11   quality of service and ensuring that the user receives the

12   message.

1   9.   A method according to claim 8, further comprising the step of

2   filtering the messages received by a user by either quality of service.

1   10.   A method according to claim 8, further comprising the step of

2   providing a listener for each user to listen for messages on the user's

3   behalf.

1   11.   A method according to claim 8, further comprising the step of

2   queuing messages sent to a user by either quality of service to be

3   delivered one by one to the user.

1   12.   A method according to claim 8, further comprising the step of

2   tagging each message with a sequence number so that a user can tell if a

3   message has been missed.

1   13.   A method according to claim 8, further comprising the step of

2   tagging each message so that a user can tell the data stream from which

3   the message was received.

1   14.   A method according to claim 9, further comprising the step of

2   allowing a user to select filtering criteria to be used for the filtering.

1   15.   A method for providing two qualities of service from a single data

2   stream, comprising:

3   (a) storing at least one of a first quality of service choice and a

4   second quality of service choice for each of a plurality of

5   users;

6   (b) directing each message received on the data stream for each

7   user according to that user's quality of service choice;

8   (c) multicasting the message to each user selecting the first quality

9   of service; and

10   (d) sending the message directly to each user selecting the second

11   quality of service and ensuring that the user receives the

12   message.

1   16.   A method according to claim 15, further comprising the step of

2   filtering the messages received by a user by either quality of service.

1   17.   A method according to claim 15, further comprising the step of

2   providing a listener for each user to listen for messages on the user's

3   behalf.

1   18.   A method according to claim 15, further comprising the step of

2   queuing messages sent to a user by either quality of service to be

3   delivered one by one to the user.

1   19.   A method according to claim 15, further comprising the step of

2   tagging each message with a sequence number so that a user can tell if a

3   message has been missed.

1   20.   A method according to claim 15, further comprising the step of

2   tagging each message so that a user can tell the data stream from which

3   the message was received.

1   21.   A computer-readable medium, comprising:

2   (a) means for storing at least one of a first quality of service choice

3   and a second quality of service choice for each user of a

4   system;

5   (b) means for processing each message received on a data stream

6   using a single API and redirecting the message for each user

7   according to that user's quality of service choice;

8   (c) means for multicasting the message to each user selecting the

9   first quality of service; and

10   (d) means for sending the message directly to each user selecting

11   the second quality of service and ensuring that the user

12   receives the message.

1   22.   A computer program product for execution by a server computer for

2   allowing a user to select a quality of service for message delivery,

3   comprising:

4   (a) computer code for storing at least one of a first quality of service

5   choice and a second quality of service choice for each user

6   of a system;

7   (b) computer code for processing each message received on a data

8   stream using a single API and redirecting the message for

9   each user according to that user's quality of service choice;

10   (c) computer code for multicasting the message to each user

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11   selecting the first quality of service; and

12   (d) computer code for sending the message directly to each user

13   selecting the second quality of service and ensuring that the

14   user receives the message.

1 23. A system for allowing a user to select a quality of service for

2 message delivery, comprising:

3   (a) means for storing at least one of a first quality of service choice

4   and a second quality of service choice for each user of a

5   system;

6   (b) means for processing each message received on a data stream

7   using a single API and redirecting the message for each user

8   according to that user's quality of service choice;

9   (c) means for multicasting the message to each user selecting the

10   first quality of service; and

11   (d) means for sending the message directly to each user selecting

12   the second quality of service and ensuring that the user

13   receives the message.

1 24. A computer system comprising:

2 a processor;

3 object code executed by said processor, said object code configured

4   to:

5   (a) store at least one of a first quality of service choice and

6   a second quality of service choice for each user of a

7   system;

8   (b) process each message received on a data stream using

9   a single API and redirecting the message for each

10   user according to that user's quality of service choice;

11   (c) multicast the message to each user selecting the first

12   quality of service; and

13   (d) send the message directly to each user selecting the

14   second quality of service and ensuring that the user

15   receives the message.